UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/736,168	12/15/2000	Naoto Matsumoto	00407.00007	8093

			EXAMINER
22907 7590 02/09/2005			RAMPURIA, SATISH

BANNER & WITCOFF
1001 G STREET N W
SUITE 1100
WASHINGTON, DC 20001

ART UNIT	PAPER NUMBER
2124	

DATE MAILED: 02/09/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

	Application No.	Applicant(s)
Office Action Summary	09/736,168	MATSUMOTO, NAOTO
	Examiner	Art Unit	
	Satish S. Rampuria	2124	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>03</u> MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed
  after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any
  earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *10 December 2004 (RCE)*.
2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.
3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is
closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-6,8-12 and 14-21* is/are pending in the application.
    4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5)☐ Claim(s) _____ is/are allowed.
6)☒ Claim(s) *1-6,8-12 and 14-21* is/are rejected.
7)☐ Claim(s) _____ is/are objected to.
8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.
10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.
    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
    a)☐ All b)☐ Some * c)☐ None of:
      1.☐ Certified copies of the priority documents have been received.
      2.☐ Certified copies of the priority documents have been received in Application No. _____.
      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage
        application from the International Bureau (PCT Rule 17.2(a)).
    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)   4)☐ Interview Summary (PTO-413)
2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)   Paper No(s)/Mail Date. _____ .
3)☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)   5)☐ Notice of Informal Patent Application (PTO-152)
     Paper No(s)/Mail Date _____ .   6)☐ Other: _____ .

DETAILED ACTION

1.   This action is in response to the application filed on December 15, 2000.

2.   The objection to the specification is withdrawn in view of applicant's amendment.

3.   Claims 7 and 13 are cancelled (previously) by the applicant.

4.   Claims 1, 9, and 15 are amended by the applicant.

5.   Claims 1-6, 8-12, and 14-21 are pending.

6.   A request for continued examination under 37 CFR 1.114, including the fee set forth in

37 CFR 1.17(e), was filed in this application after final rejection. Since this application is

eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e)

has been timely paid, the finality of the previous Office action has been withdrawn pursuant to

37 CFR 1.114. Applicant's submission filed on 12/10/2004 has been entered.

Claim Rejections - 35 USC § 103

7.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

8.   Claims 1, 4, 5, 9, 10, 11, 15, 18, and 19 are rejected under 35 U.S.C. 103(a) as being

unpatentable over Ichinose, Japanese Patent No. JP411265282A, hereinafter called Ichinose in

view of US Patent No. 5,651,132 to Honda, hereinafter called Honda.

Per claim 1:

Ichinose discloses:

- A vending machine control program rewrite system for rewriting a control program of a

    vending machine (Detailed Description of the Invention, page 1 paragraph 1, lines 18-19

    "rewrites a control program in more detail about the control unit of the vending

    machine"), said vending machine comprises a control device having a storage unit storing

    the control program as a current one of the control program (Detailed Description of the

    Invention, page 1 paragraph 7, lines 38-39 "when rewriting of a control program goes

    wrong in the control unit of the vending machine using the flash memory") and (Detailed

    Description of the Invention, page 1 paragraph 8, lines 44-45 "The flash memory in

    which the control program which controls a vending machine was written, RAM which

    memorizes data etc."), which comprises;

- A host computer adapted to send a new one of the control program to said vending

    machine (Detailed Description of the Invention, page 1 paragraph 7, line 40 "enables

    rewriting of a control program even from a remote (host computer) place");

- Said control device comprising a rewritable memory as said storage unit (Detailed

    Description of the Invention, page 1 paragraph 1, line 19 "control unit (control device) of

    the vending machine which carried the flash memory"), a receiver adapted to receive said

    new control program from said host computer (Detailed Description of the Invention,

    page 3 paragraph 15, lines1-2 "A control program change dispatch demand command is

    received at the time of the call in of the vending machine") and (Detailed Description of

    the Invention, page 3 paragraph 22, lines 31-32 "rewriting of the control program of a

    vending machine from a remote place and a control program is rewritten"), and a rewriter

adapted to rewrite said control program in said rewritabel memory from said current one

to said new one of the control program (Detailed Description of the Invention, page 1

paragraph 8, lines 45-46 "and the program data write-in equipment (rewriter) for writing

a new vending machine control program in the aforementioned flash memory") and said

control device including a controller for executing said new control program (Solution of

the Invention, page 1 "When it is judged that the control program is completely written...

CPU 10 executes the control program...").

Ichinose does not explicitly disclose host computer sends to vending machine new one of control

program together with new data mapping information.

However, Honda discloses in an analogous computer system host computer sends to

vending machine new one of control program together with new data mapping information (col.

9 lines 26-34 "If previous data and previous parity data corresponding to the transfer requested

data are not found in the previous data memory 13 and the previous parity data memory 14,

respectively, the host computer 1 generates and sends a data read request through the array

controller 2 to disk units 3 which contain the transfer requested data, and previous data and

previous parity data corresponding to this transfer requested data, based on the mapping

information detected or generated in the above-mentioned mapping").

Therefore, it would have been obvious to a person of ordinary skill in the art at the time

the invention was made to incorporate the method of sending data (program or mapping

information, etc.) to machine as taught by Honda into the method for upgrading the vending

machine program as taught by Ichinose. The modification would be obvious because of one of

ordinary skill in the art would be motivated to send a program along with new associated data

information from host computer to optimize parity data update processing (col. 11, lines 30-46).

Per claims 4 and 10:

Ichinose discloses:

-   said host computer sends to said vending machine said new one of the control program

    (Detailed Description of the Invention, page 3 paragraph 15, lines 1-2 "A control

    program change dispatch demand command is received at the time of the call in of the

    vending machine") and (Detailed Description of the Invention, page 1 paragraph 8, lines

    45-46 "writing a new vending machine control program") together with a new attribute

    information of said new one of the control program (Detailed Description of the

    Invention, page 2 paragraph 9, lines 10-12, "Writing is performed about area with the

    software of empty area or the oldest version. The processing program of a power up is

    equipped with a version acquisition means to acquire the program version of each storage

    area"). As described in the applicant's specification, attribute information can be a

    version number (page 4, lines 4-5, "The attribute information is information ... such as

    version").

-   said rewriter has a rewrite determinator adapted to determine based on said new attribute

    information whether or not the control program should be rewritten (Detailed Description

    of the Invention, page 2 paragraph 9, lines 12-14, "it is characterized by equipping the

    control program of the area which has the newest version number among the version

numbers obtained from the aforementioned version acquisition means with a means to

pass the right of execution of a central arithmetic unit").

Per claims 5 and 11:

Ichinose discloses:

- said control device having a rewrite program previously stored therein, wherein said

  rewriter performs rewrite of the control program to said new one by executing said

  rewrite program, (Detailed Description of the Invention, page 1 paragraph 7, line 39, "it

  attains low-cost-ization of the rewriting equipment (rewrite program) of a control

  program") and (Detailed Description of the Invention, page 2 paragraph 10, lines 17-19,

  "in the writer program for new control program writing on Above RAM, passes and

  writes the right of execution of a central arithmetic unit in a writer program).

Per claim 9:

Ichinose discloses:

- A vending machine having a control device comprising a storage unit storing a conrol

  program storing as a current one of the control program therein and an arithmetic

  (Detailed Description of the Invention, page 1 paragraph 8, lines 43-44 "The control unit

  of the vending machine of the claim 1 of this invention the flash memory in which the

  control program which controls a vending machine") and logic unit for executing said

  current one of the control program (Detailed Description of the Invention, page 1

paragraph 8, lines 46-48 "In the control unit of the vending machine which consists of central arithmetic units which control the whole The aforementioned flash memory a program required for control of a vending machine" and Detailed Description of the Invention, page 2 paragraph 9, lines 14 "means to pass the right of execution of a central arithmetic unit (arithmetic logic unit)"), a host computer sending a new one of the control program to said vending machine (Detailed Description of the Invention, page 1 paragraph 7, line 40 "by having a means to download a new control program from a pin center, large computer (host computer)"), wherein said control device further comprise:

- A rewritable memory as said storage unit (Detailed Description of the Invention, page 1 paragraph 8, lines 43-44 "The control unit of the vending machine of the claim 1 of this invention The flash memory in which the control program which controls a vending machine");

- A communication controller adapted to control communication with said host computer (Detailed Description of the Invention, page 2 paragraph 13, lines 33-34 "The communication device (communication controller) to which the control unit of the vending machine of a claim 6 communicates with the pin center, large computer of a remote (host computer) place"); and

- Rewriter adapted to rewrite the control program received from the host computer via said communication controller (Detailed Description of the Invention, page 1 paragraph 8, lines 45-46 "and the program data write-in equipment (rewriter) for writing a new vending machine control program in the aforementioned flash memory").

Ichinose does not explicitly disclose host computer sends to vending machine new one of control program together with new data mapping information.

However, Honda discloses in an analogous computer system host computer sends to vending machine new one of control program together with new data mapping information (col. 9 lines 26-34 "If previous data and previous parity data corresponding to the transfer requested data are not found in the previous data memory 13 and the previous parity data memory 14, respectively, the host computer 1 generates and sends a data read request through the array controller 2 to disk units 3 which contain the transfer requested data, and previous data and previous parity data corresponding to this transfer requested data, based on the mapping information detected or generated in the above-mentioned mapping").

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to incorporate the method of sending data (program or mapping information, etc.) to machine as taught by Honda into the method for upgrading the vending machine program as taught by Ichinose. The modification would be obvious because of one of ordinary skill in the art would be motivated to send a program along with new associated data information from host computer to optimize parity data update processing (col. 11, lines 30-46).

Claims 15, 18, and 19 are the system claims and recited similar limitations as recited in the previously rejected claims 1, 4, and 5, respectively. Therefore, same rational applies and claims 15, 18, and 19 are rejected as claims 1, 4, and 5.

10.   Claims 2 and 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ichinose

in view of US Patent No. 5,657,301 to Yoshikawa, hereinafter called Yoshikawa.

Per claim 2:

Ichinose disclose that host computer sends new control program to vending machine. Ichinose

does not disclose that control program sent "simultaneously" and to "plurality" of vending

machine.

However, Yoshikawa, discloses simultaneously rewrite the control program of the

plurality of automatic changer systems by the external host computer (col. 4, lines 24-27, "it is

possible to simultaneously apply a program rewrite command to a plurality of automatic changer

systems (vending machines) so as to simultaneously rewrite the control program... by the

external host computer").

Therefore, it would have been obvious to a person of ordinary skill in the art at the time

the invention was made to incorporate the teaching of Yoshikawa in to teaching of Ichinose to

have the control program sent concurrently to a several systems (vending machines) from the

host computer. The modification would be obvious because of one of ordinary skill in the art

would be motivated to operate rewriting a program and acquiring the data of the system

concurrently and to I from several systems (vending machine).

Claim 16 is the system claim and recited similar limitations as recited in the previously rejected

claim 2 (see previous office action, mailed November 5, 2003). Therefore, same rational applies

and claim 16 is rejected as claim 2.

11.   Claims 3 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ichinose

in view of US Patent No. 5,581,485 to Richmond, hereinafter called Richmond.

Per claim 3:

Ichinose discloses that host computer sends control program to the vending machine. Ichinose

does not disclose control program sent at "predetermined schedule" to vending machine.

However, Richmond discloses control program are configured to suspend/continue

execution at predetermined suspend point (Abstract, lines 16-22 "The control programs are

configured to suspend execution at predetermined suspend points and to continue execution at

return points associated with said suspend points, and are executed sequentially in a concurrent

manner by a scheduler program so that execution of the next control program in sequence

continues when an executing program suspends.").

Therefore, it would have been obvious to a person of ordinary skill in the art at the time

the invention was made to incorporate the teaching of Richmond in to teaching of Ichinose to

have host computer send the control program to vending machine in accordance with a

predetermined schedule. The modification would be obvious because of one of ordinary skill in

the art would be motivated to send a program (control program) at prearranged timetable from

host computer.

Claim 17 is the system claim and recited similar limitations as recited in the previously rejected

claim 3. Therefore, same rational applies and claim 17 is rejected as claim 3.

12.   Claims 6, 12, and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Ichinose in view of US Patent No. 5,603,056 to Totani, hereinafter called Totani.

Per claims 6 and 12:

Ichinose discloses that host computer sends control program to the vending machine and write -

in equipment writes new control program with a means to pass the right of execution. Ichinose

does not disclose host computer sends control program with a rewrite program.

However, Totani, in detailed description of the preferred embodiments, discloses the host

computer sends the control program together with rewrite program (col. 4, lines 30-33, "The 110

interface 4 connects the control microcomputer 1 to the host computer 7 to receive a new control

program or a new rewrite program from the host computer") and rewriter performs the rewrite of

the control program by executing the rewrite program (col. 5, lines 27-34, "After rewrite

program stored in the rewrite program ...executes the rewrite routine saved in the RAM 3 (step

S3).")

Therefore, it would have been obvious to a person of ordinary skill in the art at the time

the invention was made to incorporate the teaching of Totani into teaching of Ichinose to send

control program together with rewrite program and rewrite control program by executing the

rewrite program (Totani, col. 7, lines 8-14). The modification would be obvious because of one

of ordinary skill in the art would be motivated to send the control program together with a

rewrite program and execute the rewrite program to rewrite the control program received from

host computer (Totani, col. 7 lines 7-14).

Per claim 20 is the system claim and recited similar limitations as recited in the previously

rejected claim 6. Therefore, same rational applies and claim 20 is rejected as claim 6.

13.   Claims 8, 14, and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Ichinose in view of US Patent No. 5,307,346 to Fieldhouse, hereinafter called Fieldhouse.

Per claims 8 and 14:

Ichinose disclose all the limitations except data remapping program received from the host

computer.

However, Fieldhouse, in Network-Field interface for manufacturing systems, discloses

the program module for the mapping is sent from the host computer (col. 3, lines 43-48 "The

program module which achieves the mapping between the READ & WRITE services of the

network's communication protocol and the data locations within the attached field device may be

termed a Complex Device VIVID, or CD VIVID, and again it is this with which a host computer

actually communicates").

Therefore, it would have been obvious to a person of ordinary skill in the art at the time

the invention was made to incorporate the teaching of Fieldhouse into teaching of Ichinose to

have the program (data re-mapping) module sent from host computer. The modification would

be obvious because of one of ordinary skill in the art would be motivated to send a program (data

remapping) along with new commonly used information from host computer (col. 2, lines

43-48).

Claim 21 is the system claim and recited similar limitations as recited in the previously rejected

claim 8. Therefore, same rational applies and claim 21 is rejected as claim 8.

Response to Arguments

14. Applicant's arguments with respect to claim 1 have been considered but they are not

    persuasive.

In the remarks, the applicant has argued that:

- Neither the Japanese Patent nor Honda disclose the concept of two computing devices

    operating in tandem to send a new control program and new data mapping information

    and also execute the new control program.

- Neither the Japanese Patent nor Honda disclose, therefore, the concept of a first

    computing device sending mapping information and a program, and a second computing

    device that utilizes the mapping information to execute the program.

Examiner's response:

- Japanese Patent discloses the updating flash by sending a control program and executing

    it upon receiving remotely as claimed in claim 1(see the rejection above). Japanese Patent

    however, does not disclose data mapping information, but, Honda disclose the data

    mapping information in sending receiving data via host or remotely as claimed in claim 1

    (see the rejection above). It is noted that the rejection clearly points out where Japanese

    Patent and Honda teach the claimed features and why it would have been obvious to

    combine their teachings. Applicant only makes general allegations and does not point out

any errors in the rejection. Rather, in response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986). Therefore, the rejection is proper and maintained herein.

- Both Japanese Patent and Honda disclose update/rewrite data on a disk/memory remotely. Honda discloses sending data mapping information remotely and executed on the disk (see the summary of the invention). Japanese Patent discloses the updating flash by sending a control program and executing it upon receiving remotely (see the Means for solving the problem section). It is noted that the rejection clearly points out where Japanese Patent and Honda teach the claimed features and why it would have been obvious to combine their teachings. Applicant only makes general allegations and does not point out any errors in the rejection. Rather, in response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986). Therefore, the rejection is proper and maintained herein.

Conclusion

15. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Any inquiry concerning this communication or earlier communications from the

examiner should be directed to **Satish S. Rampuria** whose telephone number is **(571) 272-3732**.

The examiner can normally be reached on **8:30 am to 6:00 pm** Monday to Friday except every

other Friday and federal holidays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, **Kakali Chaki** can be reached on **(571) 272-3719**. The fax phone number for the

organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent

Application Information Retrieval (PAIR) system. Status information for published applications

may be obtained from either Private PAIR or Public PAIR. Status information for unpublished

applications is available through Private PAIR only. For more information about the PAIR

system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR

system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Satish S. Rampuria
Patent Examiner
Art Unit 2124
02/07/2005

KAKALI CHAKI
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2100